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**NOTICE OF ALLOWANCE
AND ISSUE FEE DUE**

- ☐ Note attached communication from the Examiner
☐ This notice is issued in view of applicant's communication filed _____

SERIES CODE/SERIAL NO.	FILING DATE	TOTAL CLAIMS	EXAMINER AND GROUP ART UNIT	DATE MAILED
07/655,514	03/06/90	006	ROYER, W	2105 04/22/92

TITLE OF INVENTION TOMITA, SHOJI

A DEVELOPING SLEEVE WITH AXIALLY PARALLEL GROOVES FOR A MAGNETIC
BRUSH DEVELOPING UNIT (AS AMENDED)

ATTY'S DOCKET NO.	CLASS-SUBCLASS	BATCH NO.	APPLN. TYPE	SMALL ENTITY	FEE DUE	DATE DUE
3	118-657.000	C21	UTILITY	NO	\$1130.00	07/22/92

**THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT.
PROSECUTION ON THE MERITS IS CLOSED.**

**THE ISSUE FEE MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS
APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED.**

HOW TO RESPOND TO THIS NOTICE:

I. Review the SMALL ENTITY Status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

- A. If the Status is changed, pay twice the amount of the FEE DUE shown above and notify the Patent and Trademark Office of the change in status, or
B. If the Status is the same, pay the FEE DUE shown above.

If the SMALL ENTITY is shown as NO:

- A. Pay FEE DUE shown above, or
B. File verified statement of Small Entity Status before, or with, payment of 1/2 the FEE DUE shown above.

- II. Part B of this notice should be completed and returned to the Patent and Trademark Office (PTO) with your ISSUE FEE. Even if the ISSUE FEE has already been paid by a charge to deposit account, Part B should be completed and returned. If you are charging the ISSUE FEE to your deposit account, Part C of this notice should also be completed and returned.
- III. All communications regarding this application must give series code (or filing date), serial number and batch number. Please direct all communications prior to issuance to Box ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees.



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SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
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EXAMINER

ART UNIT	PAPER NUMBER
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DATE MAILED:

9
4/22/92

NOTICE OF ALLOWABILITY

PART I.

1. ☒ This communication is responsive to the amendment filed on 2-14-92
2. ☒ All the claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice Of Allowance And Issue Fee Due or other appropriate communication will be sent in due course.
3. ☒ The allowed claims are 1 and 3-7
4. ☐ The drawings filed on _____ are acceptable.
5. ☒ Acknowledgment is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☒ been received. [...] not been received. [...] been filed in parent application Serial No. _____, filed on _____.
6. ☒ Note the attached Examiner's Amendment.
7. ☐ Note the attached Examiner Interview Summary Record, PTOL-413.
8. ☒ Note the attached Examiner's Statement of Reasons for Allowance.
9. ☐ Note the attached NOTICE OF REFERENCES CITED, PTO-892.
10. ☐ Note the attached INFORMATION DISCLOSURE CITATION, PTO-1449.

PART II.

A SHORTENED STATUTORY PERIOD FOR RESPONSE to comply with the requirements noted below is set to EXPIRE THREE MONTHS FROM THE "DATE MAILED" indicated on this form. Failure to timely comply will result in the ABANDONMENT of this application. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

1. ☐ Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL APPLICATION, PTO-152, which discloses that the oath or declaration is deficient. A SUBSTITUTE OATH OR DECLARATION IS REQUIRED.
2. ☒ APPLICANT MUST MAKE THE DRAWING CHANGES INDICATED BELOW IN THE MANNER SET FORTH ON THE REVERSE SIDE OF THIS PAPER.
 - a. ☒ Drawing informalities are indicated on the NOTICE RE PATENT DRAWINGS, PTO-948, attached hereto or to Paper No. 6. CORRECTION IS REQUIRED.
 - b. ☐ The proposed drawing correction filed on _____ has been approved by the examiner. CORRECTION IS REQUIRED.
 - c. ☐ Approved drawing corrections are described by the examiner in the attached EXAMINER'S AMENDMENT. CORRECTION IS REQUIRED.
 - d. ☒ Formal drawings are now REQUIRED.

Any response to this letter should include in the upper right hand corner, the following information from the NOTICE OF ALLOWANCE AND ISSUE FEE DUE: ISSUE BATCH NUMBER, DATE OF THE NOTICE OF ALLOWANCE, AND SERIAL NUMBER.

Attachments:

- | | |
|--|--|
| <input checked="" type="checkbox"/> Examiner's Amendment | <input type="checkbox"/> Notice of Informal Application, PTO-152 |
| <input type="checkbox"/> Examiner Interview Summary Record, PTOL-413 | <input type="checkbox"/> Notice re Patent Drawings, PTO-948 |
| <input checked="" type="checkbox"/> Reasons for Allowance | <input type="checkbox"/> Listing of Bonded Draftsmen |
| <input type="checkbox"/> Notice of References Cited, PTO-892 | <input type="checkbox"/> Other |
| <input type="checkbox"/> Information Disclosure Citation, PTO-1449 | |

Art Unit 2105

An Examiner's Amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 C.F.R. § 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the Issue Fee.

IN THE CLAIMS

Claim 1, line 4, before "circumferential" change "the" to -- a --.

Claim 1, line 10, after "pitch in" change "the" to -- a --.

Claim 1, line 17, before "center" change "the" to -- a --.

Claim 1, line 23, before "radius" change "the" to -- a --.

Claim 4, line 4, before "circumferential" change "the" to -- a --.

Claim 4, line 11, after "pitch in" change "the" to -- a --.

Claim 4, line 13, before "Circumferential" change "the" to -- a --.

Claim 4, line 15, before "difference" change "the" to -- a --.

Claim 4, line 16, after "drum during" change "the" to -- a --.

✓ Claim 4, line 18, before "full" change "the" to -- a --.

Claim 4, line 18, after "such that" change "the" to -- a --. ✓

Claim 4, line 20, before "circumferential" change "the" to -- a --.

Claim 6, line 2, before "interfacing" change "the" to -- an --.

Claim 7, line 7, before "surface" change "the" to -- a --.

Claim 7, lines 9 and 10, before "circumferential" change "said" to -- a --.

Authorization for this Examiner's Amendment was given in a telephone interview with Gregory Muir on April 21, 1992.

The following is an Examiner's Statement of Reasons for Allowance:

Claims 1 and 3 are allowable over the prior art of record because the prior art of record does not disclose a developing sleeve which comprises a plurality of axially parallel grooves formed at a predetermined pitch in a circumferential direction on a circumferential surface thereof with the developing sleeve also having circumferential surface area portions having a center of curvature as a center of the developing sleeve with the circumferential surface area portions alternating in a circumferential direction with the plurality of axially parallel grooves wherein each of the plurality of axially parallel grooves has a substantially U-shaped or V-shaped cross section with the cross section comprising an angled portion and an open portion, each open portion is positioned radially outwardly along a radius of the developing sleeve for each angled portion and each open portion having a length in the circumferential direction of the developing sleeve less than a length in the circumferential direction of the developing sleeve of each of the respective circumferential surface area portions.

Claims 4-7 are allowable over the prior art of record because the prior art of record does not disclose a developing sleeve comprising a plurality of axially parallel grooves formed at a predetermined pitch in a circumferential direction on a circumferential surface thereof, the pitch being equal to or smaller than a circumferential length of the developing area and also being equal to or larger than a difference in a travel length between the surface of the developing sleeve and that of the photosensitive drum during a time required for a point on the photosensitive drum to move along a full length of the developing area such that a circumferential speed of the developing sleeve is less than or equal to twice a circumferential speed of the photosensitive drum.

Serial No. 07/655,514

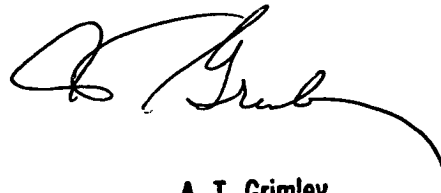
-4-

Art Unit 2105

Any comments considered necessary by applicant must be submitted no later than the payment of the Issue Fee and, to avoid processing delays, should preferably accompany the Issue Fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William J. Royer whose telephone number is (703) 308-3127.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-1782.



A. T. Grimley
SUPERVISORY PRIMARY EXAMINER
ART UNIT 215

William J. Royer
April 21, 1992 *WJR*